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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,737	12/18/2000	Giampiero Maggioni	856063.677	4179

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EXAMINER

GONZALEZ, JULIO C

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 03/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/740,737

Applicant(s)

MAGGIONI ET AL.

Examiner

Julio C. Gonzalez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

✓ 1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the sensors disclosed in claim 5 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

? { The disclosures claims that the control unit is able to process, supply and predict later changes, yet no steps or structural information is given as to how the control unit is able to perform the tasks disclosed in the claims. Also, what is switching off the voltage regulator? The control unit based on the state of the engine? What is considered a minimum value (claim 10)? Is the voltage regulator been switched off when the vehicle is turn off and been turn on when the vehicle is turn or when the vehicle reaches certain speed?
✓ }

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3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- ✓ 4. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the claim discloses that the control unit is within a regulating loop, what is the regulating loop? Is the regulating loop inside the voltage regulator? Or is the regulating loop referring to a feedback means for regulating the control unit?

✓ In claim 6, what is considered to be a "fast rate"? What is the "real time" compared to?

In order to advance prosecution in the merits, the Prior Art will be applied as best understood by the examiner.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

6. Claims 1-4, 7, 11 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Maruyama et al.

Maruyama et al discloses a voltage regulator 3, a control unit 6, a thermal engine 100, an alternator 21 wherein the control unit 6 is connected between the thermal engine 100 and the voltage regulator 3 (see figure 1). Also, the control unit supplies the voltage regulator with a square wave signal (see figures 3, 4C, 4D, 4F).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5, 6, 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama et al in view of Iwatani et al.

Maruyama et al discloses a voltage regulator 3, a control unit 6, a thermal engine 100, an alternator 21 wherein the control unit 6 is connected between the thermal engine 100 and the voltage regulator 3 (see figure 1). Also, the control unit supplies the voltage regulator with a square wave signal (see figures 3, 4C, 4D, 4F).

However, Maruyama does not disclose using sensors.

On the other hand, Iwatani discloses for the purpose of increasing the efficiency of fuel for vehicles and quickly charging the battery, a plurality of switches and buffers been used in a voltage regulator 3A (see figure 1). Also, sensors are used (see figure 1), which are dependent on the state of the engine (column 4, lines 66, 67).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a voltage regulator as disclosed by Maruyama and to modify the invention by using a plurality of sensors for the purpose of increasing the efficiency of fuel for vehicles and quickly charging the battery as disclosed by Iwatani.

9. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama et al in view of Iwatani et al and Bartol et al.

Maruyama et al discloses a voltage regulator 3, a control unit 6, a thermal engine 100, an alternator 21 wherein the control unit 6 is connected between the thermal engine 100 and the voltage regulator 3 (see figure 1). Also, the control unit supplies the voltage regulator with a square wave signal (see figures 3, 4C, 4D, 4F). However, Maruyama does not disclose using sensors.

On the other hand, Iwatani discloses for the purpose of increasing the efficiency of fuel for vehicles and quickly charging the battery, a plurality of switches and buffers been used in a voltage regulator 3A (see figure 1). Also, sensors are used (see figure 1), which are dependent on the state of the engine (column 4, lines 66, 67). However, neither Maruyama nor Iwatani disclose that the voltage regulator can be turn off.

On the other hand, Bartol disclosed for the purpose of increasing the life expectancy of voltage regulators by protecting them against voltage overload that the voltage regulator can be turn off or stay in standby mode (see abstract & column 2, lines 46-50).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a voltage regulator as disclosed by Maruyama and to modify the invention by using a plurality of sensors for the purpose of increasing the efficiency of fuel for vehicles and quickly charging the battery as disclosed by Iwatani and to turn off the voltage regulator for the purpose of increasing the life expectancy of voltage regulators by protecting them against voltage overload as disclosed by Bartol.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Jcg

March 6, 2002


NESTOR RAMIREZ
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